

## WHAT IS CLAIMED IS:

1. A semiconductor device characterized by comprising  
an embedded insulation layer formed in a  
5 semiconductor substrate;  
a trench isolating between a plurality of power  
semiconductor elements formed on the semiconductor  
substrate on said embedded insulation layer and said power  
semiconductor elements; and  
10 an isolator insulating and driving control  
electrodes of said power semiconductor elements.
2. A semiconductor device according to claim 1,  
characterized in that said plurality of power  
15 semiconductor elements are connected in series and each  
has constant voltage elements connected in parallel.
3. A semiconductor device according to claim 1,  
characterized in that said plurality of power  
20 semiconductor elements are connected in series and each  
has constant voltage elements connected in parallel  
between electrode on one side and said control electrode.
4. A semiconductor device according to any one of  
25 claims 1 to 3, characterized in that said plurality of  
power semiconductor elements drive an ignition coil.
5. A semiconductor device according to any one of  
claims 1 to 3, characterized in that said plurality of  
30 power semiconductor elements drive a fuel injection valve.

6. A semiconductor device according to any one of claims 1 to 5, characterized in that said plurality of power semiconductor elements have an input control circuit supplying a control signal of a specific control pattern to said control electrodes of said plurality of power semiconductor elements on the base of input signals.

7. A semiconductor device according to claim 6, characterized in that said specific pattern is changeable on the base of an input signal from a communication port.

8. A semiconductor device according to claim 6, characterized in that said input control circuit is provided with a timer circuit controlling timing of supply of control signals to said control electrode.

9. A semiconductor device according to claim 8, characterized in that said timer circuit operates on the bases of clock supplied from said communication port.

10. A semiconductor device characterized by comprising an embedded insulation layer formed in a semiconductor substrate;

a trench isolating between a plurality of power semiconductor elements formed on the semiconductor substrate on said embedded insulation layer and said power semiconductor elements; and

an isolator insulating and driving control electrodes of said power semiconductor elements, said power semiconductor elements comprising a

plural pairs of high withstand voltage power semiconductor elements composed of elements isolated by trenches and elements not isolated by trenches, and low withstand voltage power semiconductor elements composed of only elements not isolated by trenches.

11. A semiconductor device according to claim 10, characterized in that said plural pairs of high withstand voltage power semiconductor elements form a bridge circuit.

12. A semiconductor device according to claim 10, characterized in that said plural pairs of high withstand voltage power semiconductor elements form an injector circuit.

13. A semiconductor device characterized by comprising a plurality of power semiconductor elements formed on a semiconductor substrate and insulating means for insulating between said plurality of power semiconductor elements and a drive circuit for driving a control electrode of each of said power semiconductor elements, said plurality of power semiconductor elements being formed by connecting in series a plurality of elements isolated by said insulating means.

14. A semiconductor device according to claim 13, characterized in that when over current is detected in current flowing in at least other element connected in series, said drive circuit suppresses driving current supplied to the elements on one side.,